Marked Up Version of Amendments to Specification

In the Specification:

At page 4, lines 3-12:

An electric field may be applied between the template and the substrate. The application of the electric field may create a static force that attracts at least a portion of the polymerizable composition toward the template. The portions of the polymerizable composition that are attracted to the template are complementary to the pattern of structures imprinted on the template. In one embodiment, the portions of the polymerizable composition that are attracted to the template come into contact with the template, while the remaining portions do not contact the template. Alternatively, neither the attracted portions nor the remaining portions of the polymerizable composition come into contact with the template. The attracted portions, however, extend toward the template while the un-attracted portions do not extend to the same extent that the attracted portions extend toward the template.

At page 4, lines 14-27:

The polymerizable composition may be polymerized using an appropriate curing technique. For example, the polymerizable composition may include a photoinitiator and be curable by exposure to activating light while an electric field is applied to the template and the substrate. As used herein "activating light" means light that may affect a chemical change. Activating light may include ultraviolet light (e.g., light having a wavelength between about 300 nm to about 400 nm), actinic light, visible light or infrared light. Generally, any wavelength of light capable of affecting a chemical change may be classified as activating. Chemical changes may be manifested in a number of forms. A chemical change may include, but is not limited to, any chemical reaction that causes a polymerization or a cross-linking reaction to take place. The activating light may be passed through the template prior to reaching the composition. In this

manner the polymerizable composition may be cured to form structures complementary to the structures formed on the template. Alternatively, the polymerizable composition may be cured by applying heat to the composition, while an electric field is applied to the template and the substrate.

At page 4, line 29 through page 5 line 3:

After the polymerizable composition is cured, the structures may be further defined by etching the cured polymerizable composition. Etching may improve the aspect ration of the structures. Any of the commonly used etching techniques may be used, including reactive ion etching.

At page 7, lines 4-18:

The embodiments described herein may potentially create lithographic patterned structures quickly (in a time of less than about 1 second). The structures may have sizes of tens of nanometers. The structures may be created by curing a polymerizable composition (e.g., a spin-coated UV curable liquid) in the presence of electric fields. Curing the polymerizable composition then sets the pattern of structures on the substrate. The pattern may be created by placing a template with a specific nanometer-scale topography at a carefully controlled nanoscale distance from the surface of a thin layer of the liquid on a substrate. If all or a portion of the desired structures are regularly repeating patterns (such as an array of dots), the pattern on the template may be considerably larger than the size of the desired repeating structures. The template may be formed using direct write e-beam lithography. The template may be used repeatedly in a high-throughput process to replicate nanostructures onto substrates. In one embodiment, the template may be fabricated from a conducting material such as Indium Tin Oxide that is also transparent to UV light. The template fabrication process is similar to that of phase shift photomasks for optical lithography; phase shift masks require an etch step that creates a topography on the template.

At page 9, lines 9-21:

In one embodiment, depicted in Figure 1, a thick blank of fused silica has been chosen as the base material for the template. Indium Tin Oxide (ITO) may be deposited onto the fused Silica. ITO is transparent to visible and UV light and is a conducting material. ITO may be patterned using high-resolution e-beam lithography. A low-surface energy coating (for example, a fluorine containing self-assembly monolayer) may be coated onto the template to improve the release characteristics between the template and the polymerized composition. The substrate may include standard wafer materials such as Si, GaAs, SiGeC and InP. A UV curable liquid may be used as the polymerizable composition. The polymerizable composition may be spin coated onto the wafer. An optional transfer layer may be placed between the wafer and the liquid layer. This transfer layer may be used for bi-layer process. The transfer layer material properties and thickness may be chosen to allow for the creation of high-aspect ratio structures from low-aspect ratio structures created in the cured liquid material. An electric field may be generated between the template and substrate by connecting ITO to a voltage source.